## INTERNATIONAL SEARCH REPORT

nal Application No PulluS2004/017333

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01M4/92 H01M4/96 B01J23/755

B01J23/86

B01J23/26 B01J23/42 B01J23/89 H01M8/10

B01J23/72

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 7 - H01M - B01JH01M B01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
US 5 126 216 A (CAPUANO GUIDO A ET AL) 30 June 1992 (1992-06-30) examples 1-4 column 2, lines 27-30	3,4,7,8, 12-38		
EP 0 743 092 A (DEGUSSA) 20 November 1996 (1996-11-20) example 8	3,4,7,8, 16-38		
EP 0 330 627 A (TANAKA PRECIOUS METAL IND) 30 August 1989 (1989-08-30) examples 1,3	3,4,7,8, 16-38		
EP 0 469 514 A (N E CHEMCAT·CORP) 5 February 1992 (1992-02-05) examples 2-7,9,10	1-38		
-/			
	US 5 126 216 A (CAPUANO GUIDO A ET AL) 30 June 1992 (1992-06-30) examples 1-4 column 2, lines 27-30  EP 0 743 092 A (DEGUSSA) 20 November 1996 (1996-11-20) example 8  EP 0 330 627 A (TANAKA PRECIOUS METAL IND) 30 August 1989 (1989-08-30) examples 1,3  EP 0 469 514 A (N E CHEMCAT·CORP) 5 February 1992 (1992-02-05) examples 2-7,9,10		

X Further documents are listed in the continuation of box C.	χ Patent family members are listed in annex.				
Special categories of cited documents:					
<ul> <li>"A" document defining the general state of the art which is not considered to be of particular relevance</li> <li>"E" earlier document but published on or after the international filing date</li> <li>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</li> <li>"O" document referring to an oral disclosure, use, exhibition or other means</li> <li>"P" document published prior to the international filing date but later than the priority date claimed</li> </ul>	T* later document published after the International filling date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention.  X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone.  Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.  &* document member of the same patent family				
Date of the actual completion of the international search	Date of mailing of the international search report				
3 November 2004	12/11/2004				
Name and mailing address of the ISA  European Patent Office, P.B. 5818 Patentlaan 2	Authorized officer				
NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Jacquinot, P				

## INTERNATIONAL SEARCH REPORT

in Ional Application No
PCT/US2004/017333

C.(Continu	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	PCT/US2004/017333
ategory °		Relevant to claim No.
1	EP 0 827 225 A (N E CHEMCAT CORP) 4 March 1998 (1998-03-04)	1-38
١	examples 2-11,13,14,18-23,41-43	
	US 3 925 259 A (KANE ROBERT HARVEY) 9 December 1975 (1975-12-09) catalysts A-C	1-38
	US 2003/008197 A1 (GORER ALEXANDER) 9 January 2003 (2003-01-09) the whole document	1-38
		}
PCT/ISA#	210 (continuation of second sheet) (January 2004)	

## INTERNATIONAL SEARCH REPORT

nformation on patent family members

In ional Application No PCT/US2004/017333

Deta	J	<del></del>			PCT/US2004/017333		
cited in se	document earch report		Publication date		Patent family member(s)		Publication date
US 512	26216 	Α	30-06-1992	NONE			
EP 0743092	Α	20-11-1996	DE	1951759	8 C1	02-01-199	
				AT	18394	6 T	15-09-199
				DE	5960292	8 D1	07-10-199
				DK	74309	2 T3	27-03-200
				EP	074309	2 A1	20-11-199
				JP	288045	0 B2	12-04-199
				JP	901743	5 A	17-01-199
				US	576703	6 A	16-06-199
EP 033	80627	Α	30-08-1989	JP	121003	<u></u> 7 А	23-08-198
				JP	255687	4 B2	27-11-199
				DE	6890039	9 D1	12-12-199
				EP	033062	7 A1	30-08-198
				US	495447	4 A 	04-09-199
EP 046	9514	Α	05-02-1992	JP	290916		23-06-199
				JP	408726		19-03-199
				DE	6910236		14-07-199
				DE	6910236	5 T2	17-11-199
				EP	046951	4 A2	05-02-199
				US 	517897	1 A 	12-01-199
EP 082	7225	Α	04-03-1998	JP	1006991	4 A	10-03-199
				CA	221407	6 A1	26-02-199
				EP	082722	5 A2	04-03-199
				US	587686	7 A	02-03-199
US 392	5259	Α	09-12-1975	US	392823	 5 A	23-12-197
				AU	752597	4 A	13-05-197
				BE	82207	5 A1	12-05-197
				CA	101493	4 A1	02+08-197
				DE	245335		15-05-197
				ES	43185	6 A1	01-11-1976
				FR	225056		06-06-197
				GB	1492599		23-11-1977
				JP	87952		31-08-197
				JP	5007949!	5 A	27-06-1975
				JP	52001920	D B	18-01-1977
			NL	7414720		14-05-197	
			SE	7414174		13-05-1975	
				US	4021373		03-05-1977
			CA JP	1056797	/ A1	19-06-1979	
				JP JP	113918		11-03-1983
			JP	50083283	L A	05-07-1975	
				UF 	57029538 		23-06-1982
US 2003008197	3008197	A1	09-01-2003	US US	6517965	B1	11-02-2003
				AU	2004166396	Al	26-08-2004
				AU	5865300	J A	04-10-2000
			WO	5865500	J A	28-09-2000	
			WO	0055928	AZ AD	21-09-2000	
			US	0054346 2003073575	) AZ	14-09-2000	
				U J	£0030/35/5	) AI	17-04-2003
				US	6498121	D1	24-12-2002